PAJ 00-69-76 05119754 JP **DISPLAY SYSTEM**

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PURPOSE: To compose a highly secret sentence or to view a picture on television even in a place where there are many people by contriving that contents displayed on a display can be viewed only by an operator. CONSTITUTION: The operator is allowed to view only a display object screen and not allowed to view the complementary color screen of the display object screen by intermittently shutting out the visual field of the operator with a spectacles device 3 while the display object screen and the complementary color screen thereof are alternately displayed on a display 9 by a screen generation circuit 12 and a display control circuit 14, so that the display object screen is viewed only by the operator. Then, the people around him is allowed to view the display object screen and the complementary color screen, whereby the display object screen and the complementary color screen are mixed by afterimage action to make the display just like a single screen which is displayed. COPYRIGHT: (C)1993,JPO&Japio

NO-DESCRIPTORS

PATENT ABSTRACTS OF JAPAN

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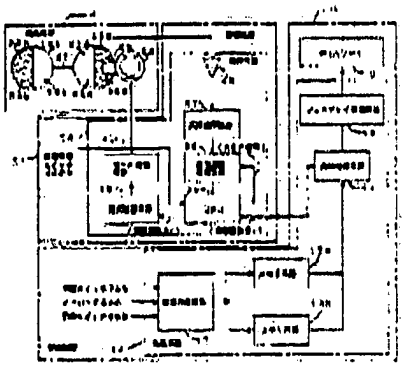
(71)Applicant : **SONY CORP**
(72)Inventor : **NAKAMURA CHIE**

(54) DISPLAY SYSTEM

(57)Abstract:
PURPOSE: To compose a highly secret sentence or to view a picture on television even in a place where there are many people by contriving that contents displayed on a display can be viewed only by an operator.
CONSTITUTION: The operator is allowed to view only a display object screen and not allowed to view the complementary color screen of the display object screen by intermittently shutting out the visual field of the operator with a spectacles device 3 while the display object screen and the complementary color screen thereof are alternately displayed on a display 9 by a screen generation circuit 12 and a display control circuit 14, so that the display object screen is viewed only by the operator. Then, the people around him is allowed to view the display object screen and the complementary color screen, whereby the display object screen and the complementary color screen are mixed by afterimage action to make the display just like a single screen which is displayed.



LEGAL STATUS

[Date of request for examination]

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[Patent number]

[Date of registration]

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[Date of requesting appeal against examiner's decision of rejection]

[Date of extinction of right]

CLAIMS

[Claim(s)]

[Claim 1] The display system characterized by to have the display-control section which creates the complementary-color screen used as the screen for a display, and a complementary-color relation in the display system which is made to display the display screen on a display and is shown to an operator, and displays the above-mentioned screen for a display, and a complementary-color screen by turns on a display, and the spectacles equipment which shade or penetrate an operator's field of view synchronizing with a display change of the above-mentioned display.

[Translation done.]

DETAILED DESCRIPTION

[Detailed Description of the Invention]

[0001]

[Field of the Invention] this invention relates to the display system used with a word processor, a TV apparatus, etc.

[0002]

[Description of the Prior Art] The processing result obtained based on the content inputted from the keyboard etc. or this content is expressed as the equipment with the display unit of a word processor or a TV apparatus on a display unit.

[0003]

[Problem(s) to be Solved by the Invention] However, in the display unit used with such a word processor and a TV apparatus, since the information displayed on the display unit was in sight not only of an operator but the person who is near the, when creating the text with the high degree of secrecy, there was a problem that it had to be operated in the popular place which is not. Moreover, there was [that it is various and] a problem in seeing in the location with much people for the same ground also with equipment convenient to carry like liquid-crystal-television equipment.

[0004] this invention can be prevented from being visible only to an operator in the content displayed on the display in view of the above-mentioned situation, and it aims at offering the display system as which the text with a confidentiality high even places [popular / many] can be created by this, or a television picture image etc. can be regarded.

[0005]

[Means for Solving the Problem] In order to attain the above-mentioned purpose, the display system by this invention In the display system which is made to display the display screen on a display and is shown to an operator It is characterized by having the display-control section which creates the complementary color screen used as the screen for a display, and a complementary color relation, and displays the above-mentioned screen for a display, and a complementary color screen by turns on a display, and the spectacles equipment which shades or penetrates an operator's field of view synchronizing with a display change of the above-mentioned display.

[0006]

[Function] In the above-mentioned configuration, displaying the screen for a display, and the complementary color screen of this screen for a display by turn on a display by the display-control section While an operator's field of view is intercepted intermittently and only the above-mentioned screen for a display is shown to an operator with spectacles equipment As the above-mentioned complementary color screen is not shown, the above-mentioned screen for a displa is shown only to an operator, the above-mentioned screen for a display and the above-mentioned complementary color screen are shown to the person who is in the periphery, and as these are mixed by after-image operation and the single screen is reflected, it shows.

[0007]

[Example] Drawing 1 is a block diagram showing one example of the display system by this invention.

[0008] The display system shown in this drawing A plotter 1 and the control unit 2, having the spectacles equipment 3 and displaying the screen for a display, and the complementary color screen of this screen for a display by turns by the plotter 1 While an operator's field of view is intermittently intercepted so that the spectacles equipment 3 may be controlled by the control unit 2, and only the above-mentioned screen for a display may be shown to a operator and the above-mentioned complementary color screen may not be shown, and the above-mentioned screen for a display is shown only to an operato The above-mentioned screen for a display and the above-mentioned complementary color screen are shown to the person who is in the periphery, and as these are mixed by after-image operation and the single screen is reflected, it shows.

[0009] The box 5 in which a plotter 1 is formed in the shape of a rectangle, and the keyboard 6 which has various kinds of keys and is formed on the above-mentioned box 5, The line rocker switch 7 prepared on the above-mentioned box 5, and the display circuit changing switch 8 prepared on the above-mentioned box 5, When it has the display 9 prepared in the above-mentioned box 5 free [folding], and the processing circuit 10 prepared in the above-mentioned box 5, a line rocker switch 7 is operated and power is switched on, While screen 11a for a display which the processing circuit 10 operates and is shown in drawing 2 (a) according to the content of operation of a keyboard 6 is created As shown in drawing 2 (b), complementary color screen 11b used as the above-mentioned screen 11a for a display and a complementary color relation is created, and these are displayed by turns on a display 9 with some dozens of times of periods between the periods set up beforehand, for example, 1 second.

[0010] In this case, as the processing circuit 10 is shown in drawing 7 , when a line rocker switch 7 is switched on, The screen creation circuit 12 which creates complementary color screen 11b which becomes screen 11a for a display, this screen 11a for a display, and a complementary color relation according to the content of operation of a keyboard 6, Memory circuit 13a which memorizes screen 11a for a display created by this screen creation circuit 12, Memory circuit 13b which memorizes complementary color screen 11b created by the above-mentioned screen creation circuit 12, The display-control circuit 14 which reads by turns screen 11a for a display and complementary color screen 11b which are memorized by each above-mentioned memory circuits 13a and 13b based on the control command S1 from the above-mentioned control unit 2, It has the display drive circuit 15 which incorporates screen 11a for a display and complementary color screen 11b which were read by this display-control circuit 14, and is displayed by turns on the above-mentioned display 9. Complementary color screen 11b which becomes the above-mentioned screen 11a for a display, this screen 11a for a display, and a complementary color relation based on the content of operation of a keyboard 6 is created. These are displayed by turns on a display 9 with some dozens of times of periods between the periods of the control signal S1 supplied from the above-mentioned control unit 2, for example, 1 second. Moreover, if the display circuit changing switch 8 is operated and a display side is usually specified at this time, the screen creation circuit 12 will generate the change halt command for a display, will stop a change operation of the display-control circuit 14, and will continue and display only screen 11a for a display on a display 9.

[0011] As shown in the drawing 3 and the drawing 4 , the spectacles equipment 3 Moreover, ring-like **** 18a and 18b, The bridge 20 which connects each above-mentioned **** 18a and 18b so that each half of this **** 18a and 18b may counter with an operator's scale divisions 19a and 19b, as shown in drawing 5 , The 2 arms 21a and 21b connected to each above-mentioned **** 18a and 18b as shown in drawing 3 , Disk-like shading/transparency plates 24a and 24b which have the semicircle-like shading sections 22a and 22b and the semicircle-like transparency sections 23a and 23b, and are inserted in each above-mentioned **** 18a and 18b free [rotation] as shown in drawing 5 , When it is fixed to above-mentioned one **** 18a and the motor driving signal is supplied from the above-mentioned control unit 2, The motor 25 made to rotate shading/transparency plates 24a and 24b which generate the turning effort of the rotational speed according to the value of this motor driving signal, and are inserted in each above-mentioned **** 18a and 18b, It is prepared in the above-mentioned **** 18a, and has the sensor 26 which detects the position of shading section 22a which constitutes shading/transparency plate 24a inserte in this **** 18a, and transparency section 23a. As a motor 25 is made to energize based on the motor driving signal from the above-mentioned control unit 2 and it is shown in drawing 6 , each **** 18a, While shading/transparency plates 24a and 24b inserted in 18b are rotated and an operator's field of view is made to shade and penetrate by turns by the transparency sections 23a and 23b of each [these] shading/transparency plates 24a and 24b, and the shading sections 22a and 22b The above-mentioned control unit 2 is supplied by the sensor 26, detecting the transparency section position of the above-mentioned shading/transparency plate 24a, and a shading section position, and using this detection result as a sensor appearance signal.

[0012] As shown in drawing 1 , while a control unit 2 is connected to the above-mentioned plotter 1 by the cable 30 The box 32 of the shape of a rectangle connected with the above-mentioned spectacles equipment 3 by the cable 31, It has the circuit changing switch for a display 33 prepared in this box 32, and the control circuit 34 prepared in the above-mentioned box 32. Based on the sensor appearance signal supplied from the above-mentioned spectacles equipment 3, synchronize shading/transparency operation of this spectacles equipment 3, and a screen change operation of the above-mentioned plotter 1, and only the above-mentioned screen 11a for a display is shown to an operator. While an operator's field of view is intermittently intercepted so that the

The above-mentioned screen 11a for a display and the above-mentioned complementary color screen 11b are shown to the person who is in the periphery, and as these are mixed by after-image operation and the single screen is reflected, it shows.

[0013] In this case, the amplifier circuit 36 which incorporates and amplifies the sensor appearance signal outputted from the above-mentioned spectacles equipment 3 as the above-mentioned control circuit 34 is shown in drawing 7 , The waveform shaping circuit 37 which shapes in waveform the sensor appearance signal outputted from this amplifier circuit 36, The time-interval-measurement circuit 38 which measures the timing difference with the sensor appearance signal outputted from REF signal inputted and the above-mentioned waveform shaping circuit 37, While REF signal is generated with the period set up beforehand and this is supplied to the above-mentioned time-interval-measurement circuit 38 Synchronizing with the generation timing of the above-mentioned REF signal, generate a control signal S1, and this is supplied to the display-control circuit 14 of the above-mentioned plotter 1. The measurement result furthermore outputted from the above-mentioned time-interval-measurement circuit 38, and the output timing of the above-mentioned control signal S1, CPU39 which generates the control signal S2 required to synchronize the display change timing on the display 9 of the above-mentioned plotter 1, and shading/transparency change timing of the above-mentioned spectacles equipment 3 based on the content of operation of the above-mentioned display circuit changing switch 33, It has the speed control circuit 40 which incorporates the control signal S2 outputted from this CPU39, and generates a speed-control command, and the motor drive circuit 41 which generates the motor driving signal according to the speed-control command outputted from this speed contro circuit 40.

[0014] And if screen 11a for a display is specified with the display circuit changing switch 33, while REF signal will be generated with the period set up beforehand and this will be supplied to the time-interval-measurement circuit 38 by CPU39 While a control signal S1 is generated synchronizing with generation of this REF signal, this is supplied to the display-control circuit 14 of the above-mentioned plotter 1 and screen 11a for a display and complementary color screen 11b are displayed by turns on a display 9 Synchronizing with generation of the above-mentioned REF signal, generate a control signal S2, a motor driving signal is made to output from the motor drive circuit 41, and this is supplied to the above-mentioned spectacles equipment 3. The transparency sections 23a and 23b of shading/transparency plates 24a and 24b, The shading sections 22a and 22b are located in an operator's impending side by turns.

[0015] When screen 11a for a display is shown on the display 9 by this Transparency section 23a of shading/transparency plates 24a and 24b which constitute the spectacles equipment 3, When 23b is arranged in the front face of an operator's scale divisions 19a and 19b, the above-mentioned screen 11a for a display goes into an operator's visual field and complementary color screen 11b is displayed on the above-mentioned display 9 after this The shading sections 23a and 23b of shading/transparency plates 24a and 24b which constitute the spectacles equipment 3 are arranged in the front face of an operator's scale divisions 19a and 19b, and an operator's visual field is interrupted.

[0016] And the position of the shading sections 22a and 22b which constitute the above-mentioned shading/transparency plates 24a and 24b by the sensor 26 formed in the spectacles equipment 3 at this time, As the position of the transparency sections 23a and 23b is detected, this detection result is supplied to the amplifier circuit 36 of a control unit 2 as a sensor appearance signal and it is shown in drawing 8 (a), after amplifying, As shown in drawing 8 (b), while a waveform shaping circuit 38 shapes in waveform When it is judged whether the output timing of the above-mentioned sensor appearance signal and the generation timing of the above-mentioned REF signal have shifted as shown in drawing 8 (b) and (c), and these have shifted According to this amount of gaps, the generation timing of a control signal S2 is changed, and the synchronization with the display change timing of the above-mentioned display 9 and shading/transparency timing of the above-mentioned spectacles equipment 3 is taken. Hereafter, this operation is repeated, and a plotter 1 and the spectacles equipment 3 are controlled so that only screen 11a for a display displayed on a display 9 by the control unit 2 is visible to an operator.

[0017] Moreover, if supplementary screen 11b is specified with the above-mentioned display circuit changing switch 33, it will be shifted a semicircle time and a control command 2 will be outputted from CPU39, and a plotter 1 and the spectacles equipment 3 will be controlled so that only supplementary screen 11b displayed by this on a display 9 is visible to an operator.

[0018] Thus, in this example, displaying complementary color screen 11b of screen 11a for a display, and this screen 11a for a display by turns by the plotter 1 Control the spectacles equipment 3 by the control unit 2, and only the above-mentioned screen 11a for a display is shown to an operator with it. Intercept an operator's field of view intermittently and the above-mentioned screen 11a for a display is shown only to an operator so that the above-mentioned complementary color screen 11b may not be shown. Since the above-mentioned screen 11a for a display and the above-mentioned complementary color screen 11b are shown to the person who is in the periphery, and it was made to show as these were mixed by after-image operation and the single screen was reflected It can avoid being visible only to an operator in the content displayed on the display 9, and the text with a confidentiality high even places [popular / many] can be created by this, or a television picture image etc. can be seen.

[0019] Drawing 9 is a block diagram showing other examples of the display system by this invention. In addition, in this drawing, the same sign is given to the same fraction as each part of drawing 1 .

[0020] The point that the display system shown in this drawing differs from the system shown in drawing 1 is replacing with the spectacles equipment 3 of a mechanical formula, using the spectacles equipment 45 of a liquid crystal formula, replacing with a control circuit 34 according to this, and having used the control circuit 46.

[0021] CPU47 by which a control circuit 46 changes the content of a control according to the content of operation of the display circuit changing switch 33, It has the liquid crystal shutter drive circuit 48 which generates a driving signal based on the control signal S2 outputted from this CPU47. As the period set up beforehand shows to drawing 10 (a), while a control signal S1 is generated, it supplies this to the display-control circuit 14 of a plotter 1 and screen 11a for a display and complementary color screen 11b are displayed by turns on a display 9 As shown in drawing 10 (b), it is behind from the above-mentioned control signal S1 by display delay of the above-mentioned display 9, and generate a control signal S2, and a driving signal is made to output from the liquid crystal shutter drive circuit 48 based on this control signal S2, and the spectacles equipment 45 is made to supply this.

[0022] The bridge 50 to which the spectacles equipment 45 connects each above-mentioned **** 49a and 49b so that ring-like **** 49a and 49b and each [these] **** 49a and 49b may counter with an operator's scale divisions, The 2 arms 52a and 52b connected to each above-mentioned **** 49a and 49b, When it has the liquid crystal shutters 51a and 51b inserted in each above-mentioned frames 49a and 49b and the driving signal is not supplied from the above-mentioned control circuit 46 When change the liquid crystal shutters 51a and 51b into the shading status, and an operator's field of view is made to intercept and the driving signal is supplied from the above-mentioned control circuit 46 Screen 11a for a display which changes the above-mentioned liquid crystal shutters 51a and 51b into the transparency status, and is displayed on the above-mentioned operator on the display 9 is shown.

[0023] Thus, in this example, since only screen 11a for a display was shown to the operator using the spectacles equipment 45 of a liquid crystal formula, it can avoid being visible only to an operator in the content displayed on the display 9 as well as the example mentioned above, and the text with a confidentiality high even places [popular / many] can be created by this, or a television picture image etc. can be seen.

[0024] Moreover, in this example, since the spectacles equipment 45 is made using the liquid crystal shutters 51a and 51b, spectacles equipment 45 the very thing can be made light, and an operator's burden can be made light.

[0025]

[Effect of the Invention] According to this invention, as explained above, it can avoid being visible only to an operator in the content displayed on the display, and the text with a confidentiality high even places [popular / many] can be created by this, or a television picture image etc. can be seen.

[Translation done.]

DESCRIPTION OF DRAWINGS

[Brief Description of the Drawings]
[Drawing 1] It is the block diagram showing one example of the display system by this invention.
[Drawing 2] It is the ** type view showing the example of the screen for a display displayed by the display system shown in drawing 1 , and the example of a complementary color screen.
[Drawing 3] It is the perspective diagram showing the detailed example of a configuration of the spectacles equipment shown in drawing 1 .
[Drawing 4] It is the side elevation of the spectacles equipment shown in drawing 3 .
[Drawing 5] It is the ** type view showing the example of physical relationship of the spectacles equipment shown in drawing 3 , and an operator's scale division.
[Drawing 6] It is the ** type view showing the example of the spectacles equipment shown in drawing 3 of operation.
[Drawing 7] It is the block diagram showing the example of circuit arrangement of the display system shown in drawing 1 .
[Drawing 8] It is the wave form chart showing the example of the processing circuit shown in drawing 7 of operation.
[Drawing 9] It is the block diagram showing other examples of the display system by this invention.
[Drawing 10] It is the wave form chart showing the example of the processing circuit shown in drawing 9 of operation.
[Description of Notations]
1 Plotter
2 Control Unit
3 Spectacles Equipment
9 Display
11a The screen for a display
11b Complementary color screen
12 Screen Creation Circuit (Display-Control Section)
14 Display-Control Circuit (Display-Control Section)

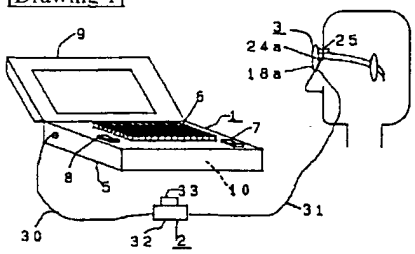
[Translation done.]

* NOTICES *

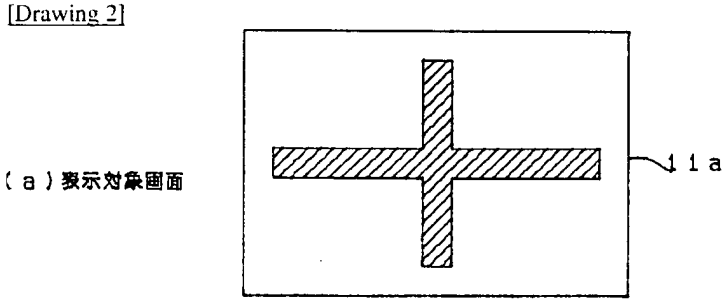
1.This document has been translated by computer. So the translation may not reflect the original precisely.
2.**** shows the word which can not be translated.
3.In the drawings, any words are not translated.

DRAWINGS

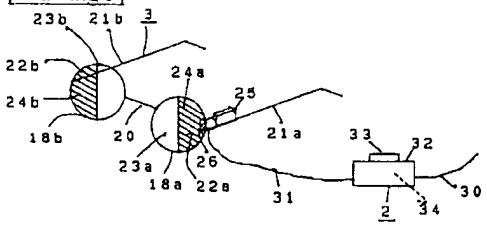
[Drawing 1]



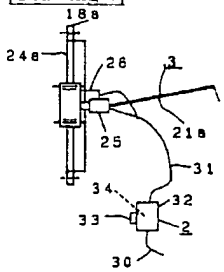
[Drawing 2]



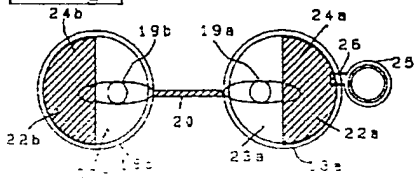
[Drawing 3]



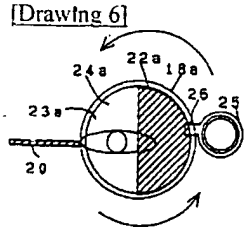
[Drawing 4]



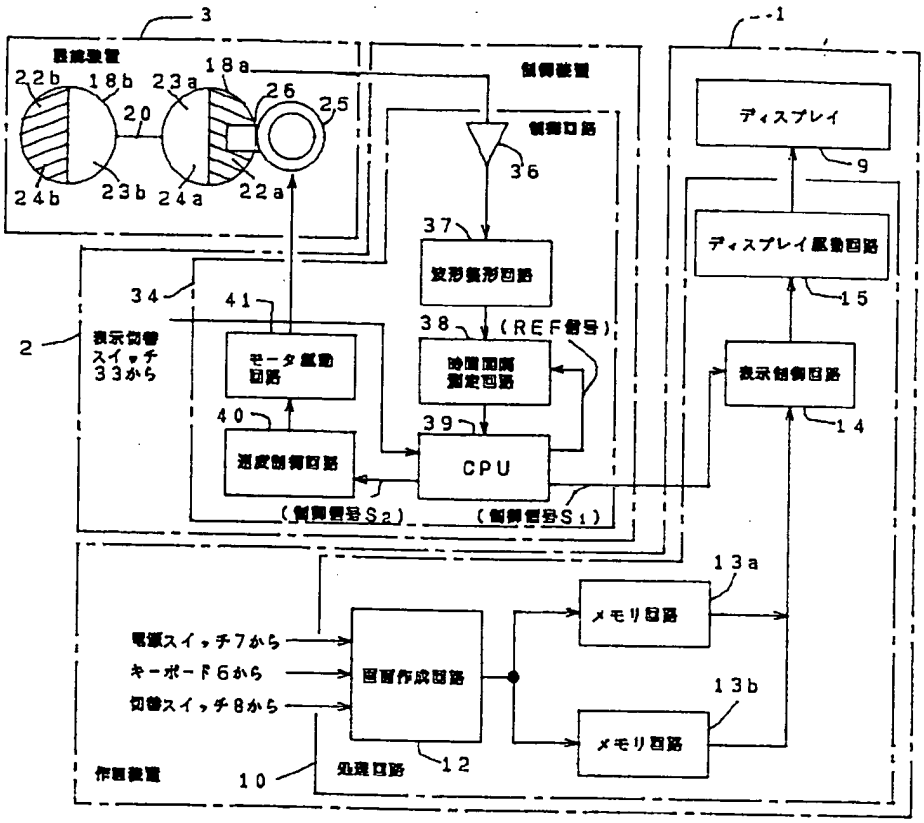
[Drawing 5]



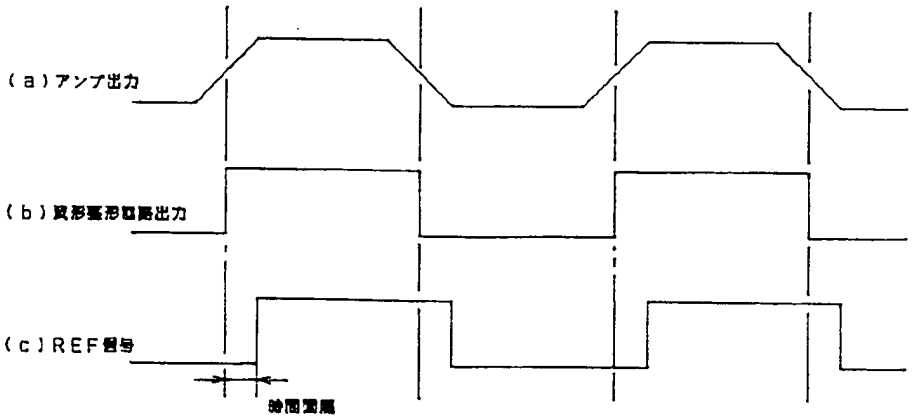
[Drawing 6]



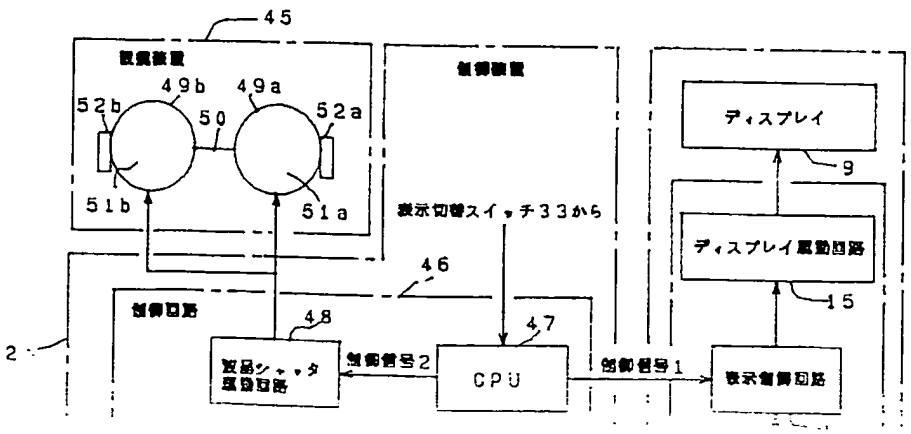
[Drawing 7]

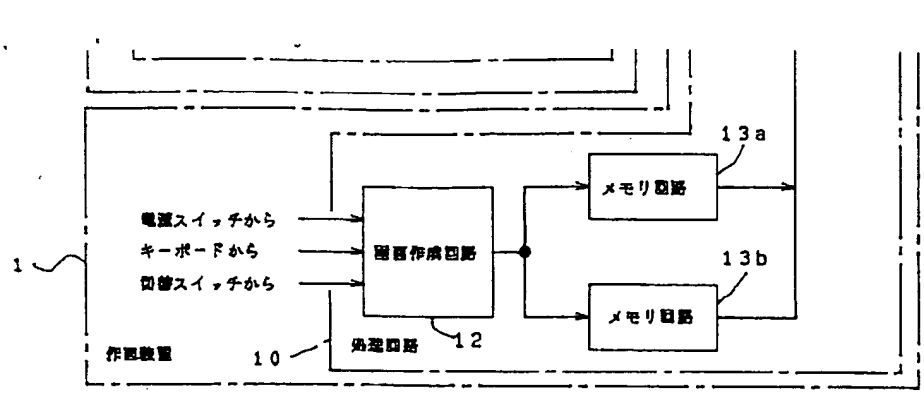


[Drawing 8]

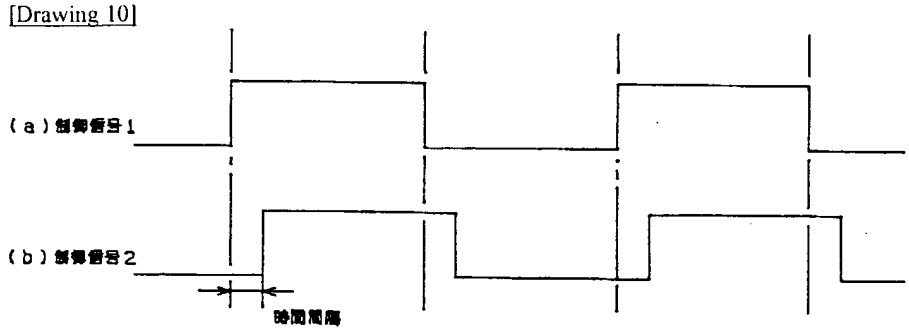


[Drawing 9]





[Drawing 10]



[Translation done.]

図面選択 図1

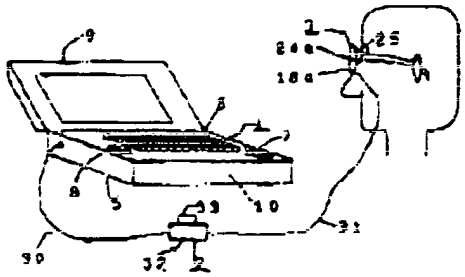


Fig. 1

(19)日本国特許庁（ＪＰ）　(12)公開特許公報（Ａ）　(11)特許出願公開番号

特開平5－119754

(43)公開日　平成５年(1993)５月18日

(51)Int.Cl.[5]		識別記号	庁内整理番号	ＦＩ	技術表示箇所
Ｇ０９Ｇ	5/02		9175－5G		
	5/00	Ａ	8121－5G		

審査請求　未請求　請求項の数１(全　７　頁)

(21)出願番号　特願平3－307200

(22)出願日　平成３年(1991)10月23日

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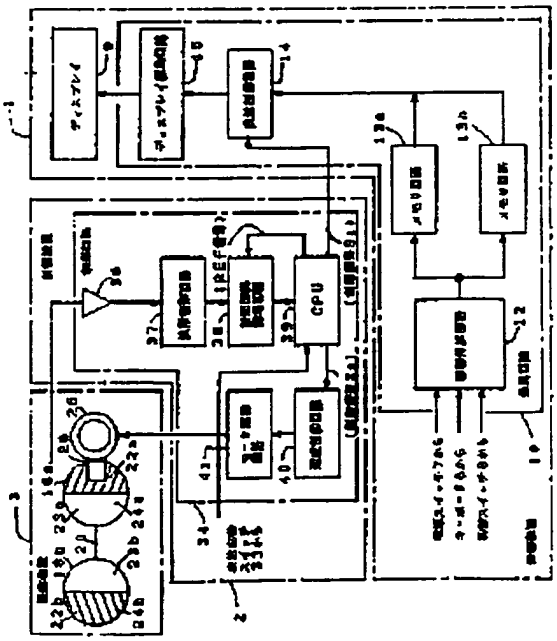
(74)代理人　弁理士　高橋　光男

(54)【発明の名称】　ディスプレイシステム

(57)【要約】

【目的】　本発明はディスプレイ上に表示された内容を操作者にしか見えないようにすることができ、これによって人気の多いところでも機密性の高い文章を作成したり、テレビジョン画像等を見たりする。

【構成】　画面作成回路１２や表示制御回路１４によって表示対象画面１１とこの表示対象画面１１ａの補色画面１１ｂとをディスプレイ９上に交互に表示させながら、眼鏡装置３によって操作者の視界を断続的に遮断して操作者に前記表示対象画面１１ａのみを見せるとともに、前記補色画面１１ｂを見せないようにして、操作者のみに前記表示対象画面１１ａを見せ、周囲にいる者に前記表示対象画面１１ａと前記補色画面１１ｂとを見せて残像作用によりこれらを混合させて単一画面が写っているように見せる。



1

【特許請求の範囲】

【請求項１】　表示画面をディスプレィ上に表示させて操作者に見せるディスプレィシステムにおいて．

表示対象画面と補色関係となる補色画面を作成してディスプレィ上に前記表示対象画面と補色画面とを交互に表示する表示制御部と、

前記ディスプレィの表示切替に同期して操作者の視界を遮光したり、透過したりする眼鏡装置と、

を備えたことを特徴とするディスプレィシステム。

【発明の詳細な説明】

【０００１】

【産業上の利用分野】本発明はワードプロセッサやテレビジョン装置等で使用されるディスプレィシステムに関する。

【０００２】

【従来の技術】ワードプロセッサやテレビジョン装置のディスプレィ装置を持つ装置では、キーボード等から入力された内容やこの内容に基づいて得られた処理結果等をディスプレィ装置上に表示する。

【０００３】

【発明が解決しようとする課題】しかしながら．このようなワードプロセッサやテレビジョン装置で使用されるディスプレィ装置においては，ディスプレィ装置上に表示された情報が操作者のみならず、その付近にいる者にも見えてしまうので、機密度の高い文章を作成するときには．人気のないところで操作しなければならないという問題があった。また、液晶テレビジョン装置のように携帯に便利な装置でも、同じ理由により、人の多い場所で見るにはいろいろと問題があった。

【０００４】本発明は上記の事情に鑑み、ディスプレィ上に表示された内容を操作者にしか見えないようにすることができ、これによって人気の多いところでも機密性の高い文章を作成したり．テレビジョン画像等を見たりすることができるディスプレィシステムを提供することを目的としている。

【０００５】

【課題を解決するための手段】上記の目的を達成するために本発明によるディスプレィシステムは、表示画面をディスプレィ上に表示させて操作者に見せるディスプレィシステムにおいて、表示対象画面と補色関係となる補色画面を作成してディスプレィ上に前記表示対象画面と補色画面とを交互に表示する表示制御部と、前記ディスプレィの表示切替に同期して操作者の視界を遮光したり．透過したりする眼鏡装置とを備えたことを特徴としている。

【０００６】

【作用】上記の構成において、表示制御部によって表示対象画面とこの表示対象画面の補色画面とをディスプレィ上に交互に表示させながら、眼鏡装置によって操作者の視界を断続的に遮断して操作者に前記表示対象画面のみを見せるとともに、前記補色画面を見せないようにして．操作者のみに前記表示対象画面を見せ、周囲にいる者に前記表示対象画面と前記補色画面とを見せて残像作用によりこれらを混合させて単一画面が写っているように見せる。

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【０００７】

【実施例】図１は本発明によるディスプレィシステムの一実施例を示す構成図である。

【０００８】この図に示すディスプレィシステムは作図装置１と、制御装置２と．眼鏡装置３とを備えており、作図装置１によって表示対象画面とこの表示対象画面の補色画面とを交互に表示させながら．制御装置２によって眼鏡装置３を制御して操作者に前記表示対象画面のみを見せ、かつ前記補色画面を見せないように操作者の視界を断続的に遮断して、操作者のみに前記表示対象画面を見せるとともに、周囲にいる者に前記表示対象画面と前記補色画面とを見せて残像作用によりこれらを混合させて単一画面が写っているように見せる。

【０００９】作図装置１は矩形状に形成される匡体５と．各種のキーを有し前記匡体５上に設けられるキーボード６と、前記匡体５上に設けられる電源スイッチ７と．前記匡体５上に設けられる表示切替スイッチ８と、前記匡体５に折り畳み自在に設けられるディスプレィ９と．前記匡体５内に設けられる処理回路１０とを備えており．電源スイッチ７が操作されて電源が投入されたとき．処理回路１０が動作してキーボード６の操作内容に応じて図２（ａ）に示すような表示対象画面１１ａを作成するとともに．図２（ｂ）に示すように前記表示対象画面１１ａと補色関係となる補色画面１１ｂを作成して．予め設定されている周期、例えば１秒間に数十回の周期でこれらをディスプレィ９上に交互に表示させる。

【００１０】この場合、処理回路１０は図７に示す如く電源スイッチ７が投入されたとき、キーボード６の操作内容に応じて表示対象画面１１ａとこの表示対象画面１１ａと補色関係になる補色画面！１ｂとを作成する画面作成回路１２と．この画面作成回路１２によって作成された表示対象画面１１ａを記憶するメモリ回路１３ａと．前記画面作成回路１２によって作成された補色画面１１ｂを記憶するメモリ回路１３ｂと．前記制御装置２からの制御指令Ｓ１に基づいて前記各メモリ回路１３ａ．１３ｂに記憶されている表示対象画面１１ａと補色画面１１ｂとを交互に読み出す表示制御回路１４と、この表示制御回路１４によって読み出された表示対象画面１１ａと補色画面１１ｂとを取り込んで前記ディスプレィ９上に交互に表示するディスプレィ駆動回路１５とを備えており、キーボード６の操作内容に基づいて前記表示対象画面１１ａと、この表示対象画面１１ａと補色関係になる補色画面１１ｂとを作成して．前記制御装置２から供給される制御信号Ｓ１の周期．例えば１秒間に数十回の周期でこれらをディスプレィ９上に交互に表示さ

せる．またこのとき，表示切替スイッチ８が操作されて通常表示側が指定されれば．画面作成回路１２は表示対象切替停止指令を生成して表示制御回路１４の切替動作を停止させてディスプレイ９上に表示対象画面１１ａのみを連続して表示させる。

【００１１】また、眼鏡装置３は図３および図４に示す如くリング状の枠部１８ａ．１８ｂと．図５に示す如くこの枠部１８ａ．１８ｂの各半分が操作者の目１９ａ、１９ｂと対向するように前記各枠部１８ａ、１８ｂを接続するブリッジ２０と、図３に示す如く前記各枠部１８ａ．１８ｂに接続される２本アーム２１ａ、２１ｂと、図５に示す如く半円状の遮光部２２ａ．２２ｂおよび半円状の透過部２３ａ、２３ｂとを有し前記各枠部１８ａ．１８ｂに回転自在にはめ込まれる円板状の遮光／透過板２４ａ、２４ｂと、前記一方の枠部１８ａに固定され．前記制御装置２からモータ駆動信号が供給されているとき、このモータ駆動信号の値に応じた回転速度の回転力を発生して前記各枠部１８ａ、１８ｂにはめ込まれている遮光／透過板２４ａ．２４ｂを回転させるモータ２５と、前記枠部１８ａに設けられ．この枠部１８ａにはめ込まれた遮光／透過板２４ａを構成する遮光部２２ａおよび透過部２３ａの位置を検出するセンサ２６とを備えており、前記制御装置２からのモータ駆動信号に基づいてモータ２５を付勢させて図６に示す如く各枠部１８ａ．１８ｂにはめ込まれた遮光／透過板２４ａ．２４ｂを回転させ．これら各遮光／透過板２４ａ、２４ｂの透過部２３ａ．２３ｂ、遮光部２２ａ．２２ｂにより操作者の視界を交互に遮光．透過させるとともに．センサ２６によって前記遮光／透過板２４ａの透過部位置、遮光部位置を検出してこの検出結果をセンサ検出信号として前記制御装置２に供給する。

【００１２】制御装置２は図１に示す如くケーブル３０によって前記作図装置１に接続されるとともに．ケーブル３１によって前記眼鏡装置３と接続される矩形状の匡体３２と、この匡体３２に設けられる表示対象切替スイッチ３３と、前記匡体３２内に設けられる制御回路３４とを備えており．前記眼鏡装置３から供給されるセンサ検出信号に基づいてこの眼鏡装置３の遮光／透過動作と前記作図装置１の画面切替動作とを同期させて操作者に前記表示対象画面１１ａのみを見せ．前記補色画面１１ｂを見せないように操作者の視界を断続的に遮断し、これによって操作者のみに前記表示対象画面１１ａを見せるとともに、周囲にいる者に前記表示対象画面１１ａと前記補色画面１１ｂとを見せて残像作用によりこれらを混合させて単一画面が写っているように見せる。

【００１３】この場合、前記制御回路３４は図７に示す如く前記眼鏡装置３から出力されるセンサ検出信号を取り込んで増幅するアンプ回路３６と．このアンプ回路３６から出力されるセンサ検出信号を波形整形する波形整形回路３７と．入力されるＲＥＦ信号と前記波形整形回路３７から出力されるセンサ検出信号とのタイミング差を測定する時間間隔測定回路３８と．予め設定されている周期でＲＥＦ信号を生成してこれを前記時間間隔測定回路３８に供給するとともに、前記ＲＥＦ信号の生成タイミングと同期して制御信号Ｓ１を生成しこれを前記作図装置１の表示制御回路１４に供給し．さらに前記時間間隔測定回路３８から出力される測定結果および前記制御信号Ｓ１の出力タイミング、前記表示切替スイッチ３３の操作内容に基づいて前記作図装置１のディスプレイ９上の表示切替タイミングと前記眼鏡装置３の遮光／透過切替タイミングとを同期させるのに必要な制御信号Ｓ２を生成するＣＰＵ３９と．このＣＰＵ３９から出力される制御信号Ｓ２を取り込んで速度制御指令を生成する速度制御回路４０と、この速度制御回路４０から出力される速度制御指令に応じたモータ駆動信号を生成するモータ駆動回路４１とを備えている。

【００１４】そして、表示切替スイッチ３３によって表示対象画面１１ａが指定されていれば．ＣＰＵ３９によって予め設定されている周期でＲＥＦ信号を生成してこれを時間間隔測定回路３８に供給するとともに．このＲＥＦ信号の生成と同期して制御信号Ｓ１を生成しこれを前記作図装置１の表示制御回路１４に供給してディスプレイ９上に表示対象画面１１ａと、補色画面１１ｂとを交互に表示させるとともに．前記ＲＥＦ信号の生成と同期して制御信号Ｓ２を生成してモータ駆動回路４１からモータ駆動信号を出力させ．これを前記眼鏡装置３に供給して遮光／透過板２４ａ．２４ｂの透過部２３ａ、２３ｂと、遮光部２２ａ、２２ｂとを操作者の目の前面に交互に位置させる。

【００１５】これによって．ディスプレイ９上に表示対象画面１１ａが表示されているときには、眼鏡装置３を構成する遮光／透過板２４ａ、２４ｂの透過部２３ａ、２３ｂが操作者の目１９ａ．１９ｂの前面に配置されて前記表示対象画面１１ａが操作者の視野に入り．この後前記ディスプレイ９上に補色画面１１ｂが表示されているときには、眼鏡装置３を構成する遮光／透過板２４ａ．２４ｂの遮光部２３ａ．２３ｂが操作者の目１９ａ．１９ｂの前面に配置されて操作者の視野が遮られる。

【００１６】そして、このとき、眼鏡装置３に設けられたセンサ２６によって前記遮光／透過板２４ａ．２４ｂを構成する遮光部２２ａ．２２ｂの位置と、透過部２３ａ．２３ｂの位置とが検出されてこの検出結果がセンサ検出信号として制御装置２のアンプ回路３６に供給されて図８（ａ）に示す如く増幅された後．図８（ｂ）に示す如く波形整形回路３８によって波形整形されるとともに．図８（ｂ）．（ｃ）に示す如く前記センサ検出信号の出力タイミングと前記ＲＥＦ信号の生成タイミングとがずれているかどうか判定され、これらがずれているときには、このずれ量に応じて制御信号Ｓ２の生成タイミ

ングが変更されて前記ディスプレィ9の表示切替タイミングと、前記眼鏡装置3の遮光／透過タイミングとの同期がとられる。以下、この動作が繰り返されて、制御装置2によってディスプレィ9上に表示される表示対象画面11aのみが操作者に見えるように作図装置1と眼鏡装置3とが制御される。

【0017】また、前記表示切替スイッチ33によって補助画面11bが指定されていれば、半周期ずらされてCPU39から制御指令2が出力され、これによってディスプレィ9上に表示される補助画面11bのみが操作者に見えるように作図装置1と眼鏡装置3とが制御される。

【0018】このようにこの実施例においては、作図装置1によって表示対象画面11aとこの表示対象画面11aの補色画面11bとを交互に表示させながら、制御装置2によって眼鏡装置3を制御して操作者に前記表示対象画面11aのみを見せ、前記補色画面11bを見せないように操作者の視界を断続的に遮断して操作者のみに前記表示対象画面11aを見せ、周囲にいる者に前記表示対象画面11aと前記補色画面11bとを見せて残像作用によりこれらを混合させて単一画面が写っているように見せるようにしたので、ディスプレィ9上に表示された内容を操作者にしか見えないようにすることができ、これによって人気の多いところでも機密性の高い文章を作成したり、テレビジョン画像等を見たりすることができる。

【0019】図9は本発明によるディスプレィシステムの他の実施例を示すブロック図である。なお、この図において、図1の各部と同じ部分には同じ符号が付してある。

【0020】この図に示すディスプレィシステムが図1に示すシステムと異なる点はメカニカル式の眼鏡装置3に代えて液晶式の眼鏡装置45を使用し、これに応じて制御回路34に代えて制御回路46を用いるようにしたことである。

【0021】制御回路46は表示切替スイッチ33の操作内容に応じて制御内容を変更するCPU47と、このCPU47から出力される制御信号S2に基づいて駆動信号を生成する液晶シャッタ駆動回路48とを備えており、予め設定されている周期で図10（a）に示す如く制御信号S1を生成してこれを作図装置1の表示制御回路14に供給してディスプレィ9上に表示対象画面11aと、補色画面11bとを交互に表示させるとともに、図10（b）に示す如く前記制御信号S1から前記ディスプレィ9の表示遅れ分だけ遅れて制御信号S2を生成し、この制御信号S2に基づいて液晶シャッタ駆動回路48から駆動信号を出力させてこれを眼鏡装置45に供給させる。

【0022】眼鏡装置45はリング状の枠部49a、49bと、これら各枠部49a、49bが操作者の目と対向するように前記各枠部49a、49bを接続するブリッジ50と、前記各枠部49a、49bに接続される2本アーム52a、52bと、前記各枠体49a、49bにはめ込まれる液晶シャッタ51a、51bとを備えており、前記制御回路46から駆動信号が供給されていないときには、液晶シャッタ51a、51bを遮光状態にして操作者の視界を遮断させ、また前記制御回路46から駆動信号が供給されているときには、前記液晶シャッタ51a、51bを透過状態にして前記操作者にディスプレィ9上に表示されている表示対象画面11aを見せる。

【0023】このように、この実施例においては、液晶式の眼鏡装置45を使用して操作者に表示対象画面11aのみを見せるようにしたので、上述した実施例と同様に、ディスプレィ9上に表示された内容を操作者にしか見えないようにすることができ、これによって人気の多いところでも機密性の高い文章を作成したり、テレビジョン画像等を見たりすることができる。

【0024】また、この実施例においては、液晶シャッタ51a、51bを使用して眼鏡装置45を作っているので、眼鏡装置45自体を軽くして操作者の負担を軽くすることができる。

【0025】

【発明の効果】以上説明したように本発明によれば、ディスプレィ上に表示された内容を操作者にしか見えないようにすることができ、これによって人気の多いところでも機密性の高い文章を作成したり、テレビジョン画像等を見たりすることができる。

【図面の簡単な説明】

【図1】本発明によるディスプレィシステムの一実施例を示す構成図である。

【図2】図1に示すディスプレィシステムで表示される表示対象画面例と補色画面例とを示す模式図である。

【図3】図1に示す眼鏡装置の詳細な構成例を示す斜視図である。

【図4】図3に示す眼鏡装置の側面図である。

【図5】図3に示す眼鏡装置と操作者の目との位置関係例を示す模式図である。

【図6】図3に示す眼鏡装置の動作例を示す模式図である。

【図7】図1に示すディスプレィシステムの回路構成例を示すブロック図である。

【図8】図7に示す処理回路の動作例を示す波形図である。

【図9】本発明によるディスプレィシステムの他の実施例を示すブロック図である。

【図10】図9に示す処理回路の動作例を示す波形図である。

【符号の説明】

1　作図装置

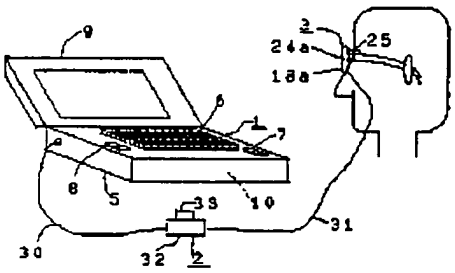
7

2　制御装置
3　眼鏡装置
9　ディスプレイ
11a　表示対象画面

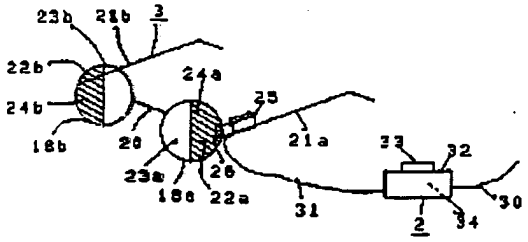
8

＊11b　補色画面
12　画面作成回路（表示制御部）
14　表示制御回路（表示制御部）
＊

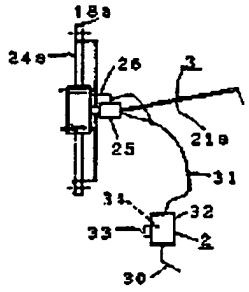
【図1】



【図3】

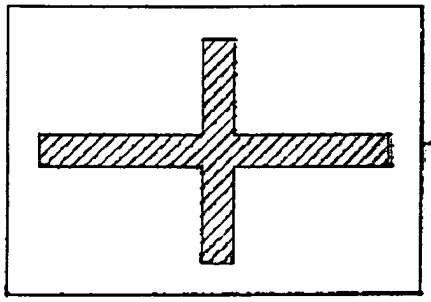


【図4】

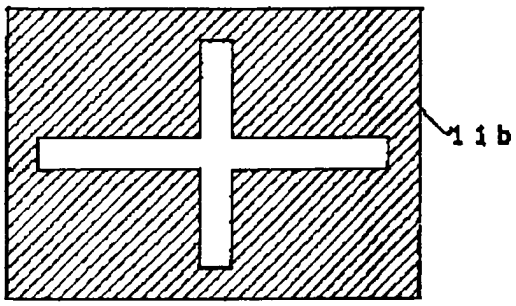


【図2】

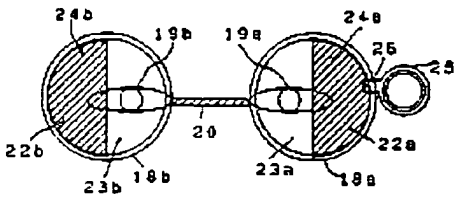
（a）表示対象画面



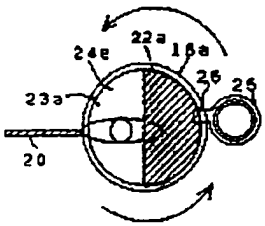
（b）補色画面



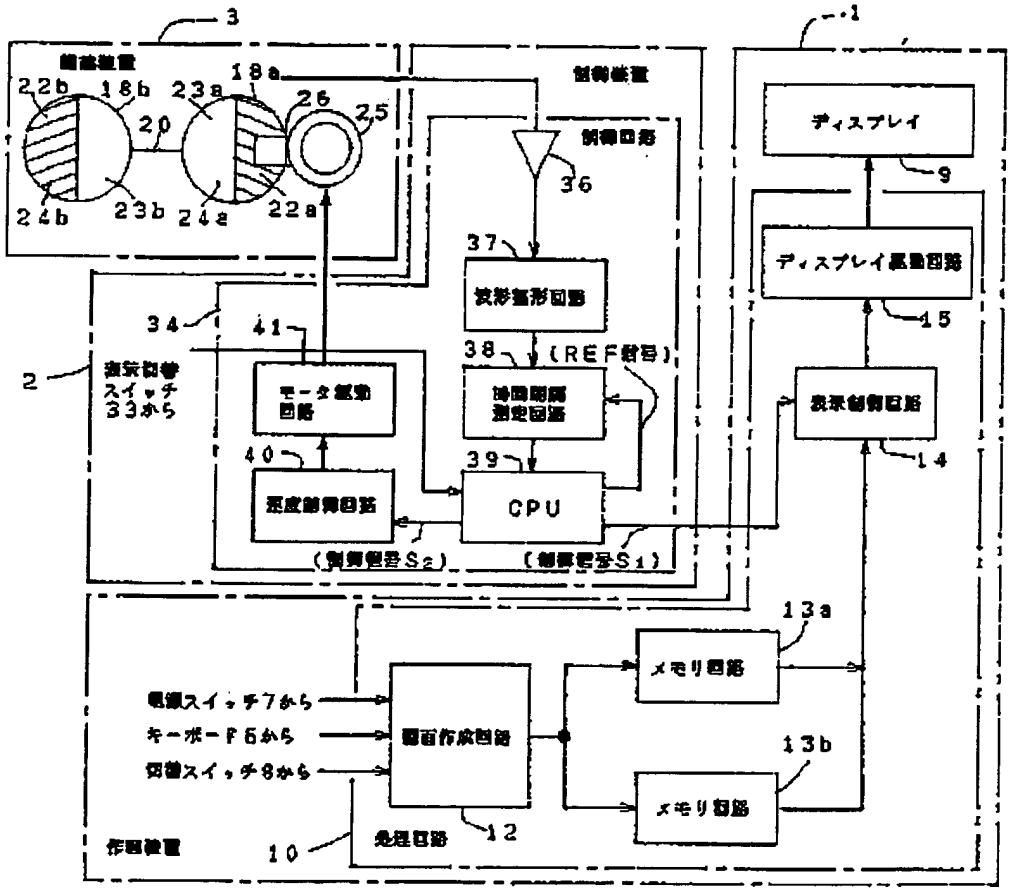
【図5】



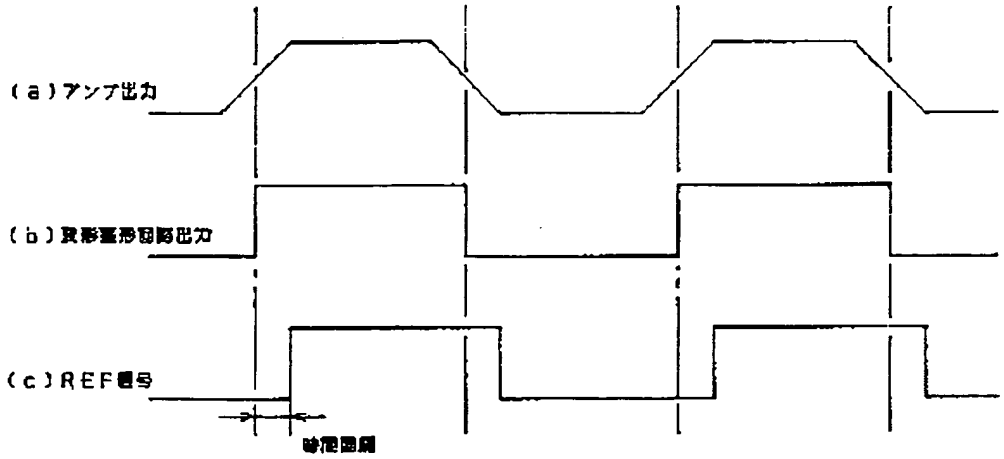
【図6】



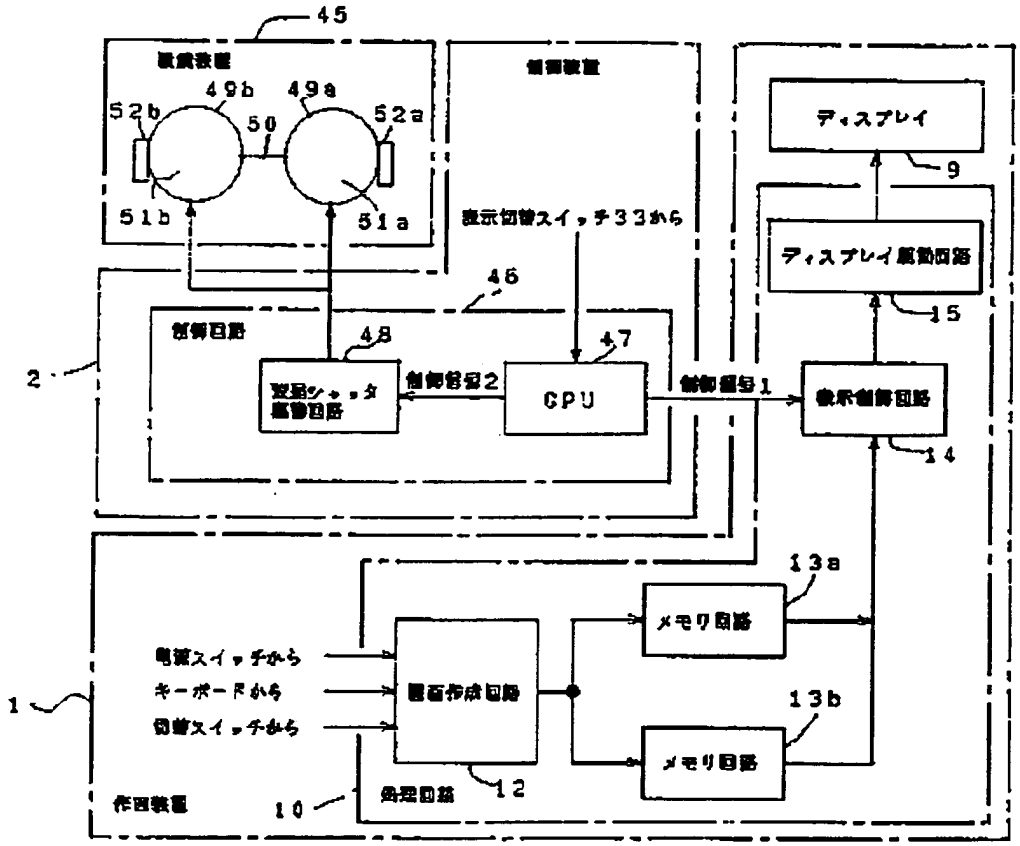
【図7】



【図8】



【図9】



【図10】